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FINAL
Comment Draft

Meeting Minutes Transmittal/Approval
Unit Manager's Meeting: 300-FF-5 Operable Unit
450 Hills, Richland, Washington
July 30, 1992

FROM/APPROVAL: Robert D. McLeod Date 8-27-92
Bob McLeod, 300-FF-5 Unit Manager, RL (A5-19)

APPROVAL: David R. Einan Date 27 Aug 92
Dave Einan, 300-FF-5 Unit Manager, EPA (B5-01)

APPROVAL: Dib Goswami Date 8/27/92
Dib Goswami, 300-FF-5 Unit Manager, WA Department of Ecology

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1	-	Meeting Summary/Summary of Commitments and Agreements
Attachment #2	-	Agenda For 300-FF-5 Meeting
Attachment #3	-	Attendance List for 300-FF-5
Attachment #4	-	Action Items Status List
Attachment #5	-	300-FF-5 Work Progress
Attachment #6	-	Remedial Investigation Summary Schedule
Attachment #7	-	Draft Approved Document Change Control Form 300-FF-5-19
Attachment #8	-	River Stage in the 300 Area
Attachment #9	-	Plan for Third Round Groundwater Sampling for 300-FF-5
Attachment #10	-	Summary of Plan for Task 5 Surface Water and Sediment Investigation Sampling
Attachment #11	-	Draft Approved Document Change Control Form 300-FF-5-09
Attachment #12	-	Draft Approved Document Change Control Form 300-FF-5-20

PREPARED BY: Suzanne E. Clarke Date 8/27/92
Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

CONCURRENCE BY: L.C Hulstrom Date 8/27/92
L. Hulstrom, WHC FF-5 RI Coordinator (H4-55)

Attachment #1

Meeting Summary

Unit Manager's Meeting: 300-FF-5 Operable Unit
July 30, 1992

1. SIGNING OF THE JUNE 300-FF-5 MEETING MINUTES:

Minutes were reviewed and approved with no changes.

2. ACTION ITEM UPDATE (See Attachment #4):

All previous action items have been closed.

3. NEW ACTION ITEMS (INITIATED JULY 30, 1992):

No new Action Items were added at this meeting.

4. STATUS AND SCHEDULE OF TASKS:

- Larry Hulstrom (WHC) presented the monthly update on task status for the 300-FF-5 Operable Unit (for details see attachments #5, #6 and #8).

- Sampling Plan for Third Quarter Groundwater
  See attachment #9.

- Task 5 Surface Water and Spring Sampling

  - Coordinating with USACE, Portland and the dams, USACE has agreed that between August 22-24 the river staging will be kept as constant as possible to enable spring sampling.

5. INFORMATION ITEMS:

- L. Hulstrom transmitted Control Change Request Forms (see attachments #7, 11 and 12) to the regulators for their review.

INFORMAL AGREEMENTS:

- EPA requested that the results of flood wave analyses be presented to the regulators as soon as possible. These results would be integral to ongoing decision making for the 300-~~FF-1 and~~ and 100 Area Operable Units.

Attachment #2

UNIT MANAGER'S MEETING AGENDA
300-FF-5 OU
July 30, 1992
10:15 - 11:30 am
450 Hills St., Room 47

Introduction:

Status:

- Action Items
- Remedial Investigation
- Schedule

Issues:

Other Topics:

- Sampling Plan for Third Round Groundwater
- Sampling Plan for Task 5 Surface Water and Sediment Investigation

Agreements and Commitments

Presenter - Larry Hulstrom

Attachment #3
300-FF-5 and
300-FF-1 Operable Unit Manager's Meeting
Official Attendance Record
July 30, 1992

Please print clearly and use black ink

PRINTED NAME	SIGNATURE	ORGANIZATION	O.U. ROLE	TELEPHONE
G Henckel	[signature]	WHC	OU Coordinator 300FF1	6-1994
Suzanne Clarke	Suzanne Clarke	SWEC	GSSC to RL	509-372-0630
Dennis Faulk	[signature]	EPA	Unit Manager	6-8631
Chuck Cline	Charles J Cline	Ecology	Hydrogeo.	(206) 438-7556
Jeff Phillips	Jeff Phillips	Ecology	Unit Manager	(509) 546-2008
Larry Hulstrom	L C Hulstrom	WHC	OU Coord. 300FF5	6-4034
Janet Franco	Janet Franco	ODOE		(503) 378-3187
Richard Carlson	Richard Carlson	WHC	mgr. 200/300 Area RI's	(509) 376-9027
Audree DeAngeles	Audree DeAngeles	PRC	EPA Support	206-624-2692
Mike Barbre	[signature]	USACE	—	509-376-1275
Kay Kimmel	Kay Kimmel	SWEC	GSSC	509-372-0610
Bob McLeod	R W McLeod	DOE-RL	OU manager	509-372-0096
Ward Staubitz	[signature]	USGS	EPA Support	206-593-6510
Ron Belden	Ron Belden	WHC	OU Asst Coord	509-372-1226
— additional for	300-FF-5 Operable	Unit Manager's	Meeting	—
Bob Peterson	R. E. Peterson	WHC Geosciences	100 Areas GW	509) 376-5858
Brian Innis	B L Innis	WHC Envir. Eng.	300-FF-5	509-376-7690
Michael Frank	MA Frank	WHC Env Eng	300-FF-5	509-376-2731
Howard Westerdahl	Howard Westerdahl	PNL	Support for RCFS	509-376-5154
Jon Specher	[signature]	Brown & Caldwell	Ecology Support	(503) 244-7005

Attachment #4

Commitments/Agreements Status List

300-FF-5 Operable Unit

July 30, 1992

Item No.	Action	Status

NO OPEN ITEMS AT THIS TIME

Attachment #5

July 30, 1992

0 Remedial Investigation Activities

Well Drilling

Geologic Characterization Borehole

Change Form 300-FF-5-07 was approved on June 3, 1992 to defer this activity to the Phase 2 RI, when the need for this activity will be reassessed.

Pumping Wells

A report summarizing the results of testing is undergoing WHC internal review at this time.

Existing Well Maintenance

Remediation work is complete on 13 wells (1-1, 1-2, 2-1, 3-9, 3-12, 4-1, 4-7, 4-9, 6-1, 8-1, 8-2, 8-3, and 8-4). Remediation work is scheduled to be completed by July 31 on the next group of 6 wells (399-5-1, 4-10, 2-2, 1-6, 3-11, and 699-S30-E15A). Work on additional wells will begin as soon as preparatory work has been completed.

Task 1--Source Investigation

(Conducted in Source Operable Units)

Task 2--Geologic Investigation

Task 2a - Geophysical Surveys

Work is continuing to reduce data gathered to date. A draft summary report is due for WHC review on July 31.

Task 2b - 300-FF-5 Wide Geological Characterization

Work continues to utilize the stratigraphic information gained from the new wells drilled to update the geologic interpretation of the 300 Area. A draft report summarizing this information is being developed by WHC Geosciences.

0 Remedial Investigation Activities (continued)

Task 3--Soil Investigation

Surface Radiation Survey - Task completed.

Soil Sampling and Analysis

Seventeen chemical data SDG's or Case Numbers were selected for validation from 300-FF-5, 10 of those SDG's are being validated as part of 300-FF-1 (i.e. the background wells), the remaining 7 are being validated by IT Corporation. Verification of the data packages to be validated has been completed by IT Corp. Validation of these packages is in process. Deficiencies have been transmitted through OSM to the laboratories for response. Validation will proceed have a response from the labs has been received. Verification of all remaining data packages is currently underway. This is also the status for first round groundwater and biota samples that are undergoing validation.

The Waste Control Plan (required by EII 4.3) was approved at the June UMM. Analytical results are being gathered so that dispositioning of drummed wastes can begin.

Change Form 300-FF-5-19 has been prepared to propose deferral of leach and sorption tests on contaminated soil samples until the 300-FF-1 treatability test has been completed.

Task 4--Groundwater Investigation

Task 4a - Hydrostratigraphy
Task 4b - Contaminant Distribution in Soil and Groundwater

EDMC has received 99% of the chemical analysis data packages from the first round of groundwater sampling. Verification of the chemical data that will undergo validation has been completed. As yet little rad. data has been received. Validation of selected data packages is underway.

The second round of groundwater sampling was completed. Approximately 3 wells out of 63 were not sampled due to pump problems or physical access problems. Well 1-19 has not been sampled due to access problems associated with it's location in the berm between the 316-5 Process Trenches. This well will be dropped from future sampling requirements. Wells 8-1 and 1-7 were not sampled due to problems with sampling pumps. These will be repaired before third round sampling is completed.

Task 4c - Hydraulic Properties

Two transducers remain to be installed to complete the network for the 300-FF-5 OU. These installations will be accomplished after well remediation work is completed on wells 2-2 and 2-5. Pump installation is scheduled to occur within the next two weeks, followed by transducer installation.

0 Remedial Investigation Activities (continued)

Task 4c - Hydraulic Properties - continued

As a result of a meeting held June 23 with the regulators a decision was made and documented on Change Form 300-FF-5-15 to postpone the scheduled tracer tests to the Phase 2 RI at which time additional data will be available from which to make a decision.

Task 4d - Aquifer Intercommunication - Well 399-1-16D

Consideration of abandonment of well 16D has been postponed until the Phase 2 RI (per Change Form 300-FF-5-14) with the stipulation that investigation of well 16C be continued. A casing integrity test was run at well 16C on July 15. Initial analysis of data obtained shows that the casing seals are leaking at a rate of about 320 ml/min, most (about 77%) of which appears to be within the unconfined aquifer interval. This rate is insufficient to explain the drawdown that occurs in the area. An additional constant head test is being planned to assess transmissivities in the area.

Task 4e - Groundwater Modeling

Modeling efforts continue on schedule.

Task 5--Surface-Water and Sediment Investigation

Task 5a - Relative Data Compilation - Task completed.

Task 5b - Riverbank Springs

An update on the river stage level is attached. The plan for the fall sampling, presently targeted for August 22 - 24, is attached and will be discussed in greater detail at this meeting. Change forms 300-FF-5-9 and 300-FF-5-20 have been prepared to address proposed modifications to the work scope associated with this task.

Task 5c - Near Shore River Water and Sediment

Approximately 40 near shore river water samples (defined in Table 6 of the SAP) will be taken during the completion of Task 5b, and submitted to OSM for analysis. This work can not be accomplished until Task 5b is performed in order to provide the correlation with the riverbank springs.

Task 5d - Transect River Water

Coordination with the L-045 Project for the Process Sewer effluent treatment facility will continue. Assessment of the data obtained from this work will define further characterization activities. This "phase 3" task has been proposed for deferral via Change Form 300-FF-5-20.

0 Remedial Investigation Activities (continued)

Task 5--Surface-Water and Sediment Investigation

Task 5e - River Stage

One of the two river stage measurement stations (SWS-1) has been active since November 7, 1991. Change Form 300-FF-5-17 was approved June 25 to eliminate the need for a second river monitoring station.

Task 5f - Boundary Conditions Along the Columbia River

Scheduled for FY 1992, if required. Available data is being reviewed.

Task 5g - Numerical Algorithms for Groundwater to Surface Water Dispersion

Scheduled for FY 1992, if required. Available data is being reviewed.

Task 6--Air Investigation

(Conducted in Source Operable Units and in coordination with well drilling activities.)

Task 7--Biota Investigations

Riparian Plants and Mammals

Results for metals analysis for nearly all of the samples (about 200) have been transmitted to the EDMC. Verfification/Validation is presently underway. Only 5 tritium analyses have yet to be received. As yet no rad. data has been received. Collection and shipment of mammals is presently scheduled to be completed by early September.

Aquatic Biota

Samples from the third round of periphyton collection were shipped to the laboratory on July 16. 9 periphyton samples from 11 possible stations were collected due to tampering with the sampling equipment by unknown persons. 10 macrophyte samples from 5 stations distributed across the OU portion of the river were collected. 11 stations were originally planned but samples were not available at the remaining areas.

Task 8--Data Evaluation

Performed with data available from the RI when gathered, and supplemented as new information becomes available.

July 30, 1992

0 Remedial Investigation Activities (continued)

Task 9--Baseline Risk Assessment

Efforts will be initiated soon to begin this task with available data. The site wide methodology being developed as part of Milestone M-29-00 will be utilized as soon as it becomes available. Development of the 300-FF-5 risk assessment has been initiated in conjunction with the risk assessment for the 300-FF-1 OU. A kickoff meeting with a subcontractor is scheduled for July 31.

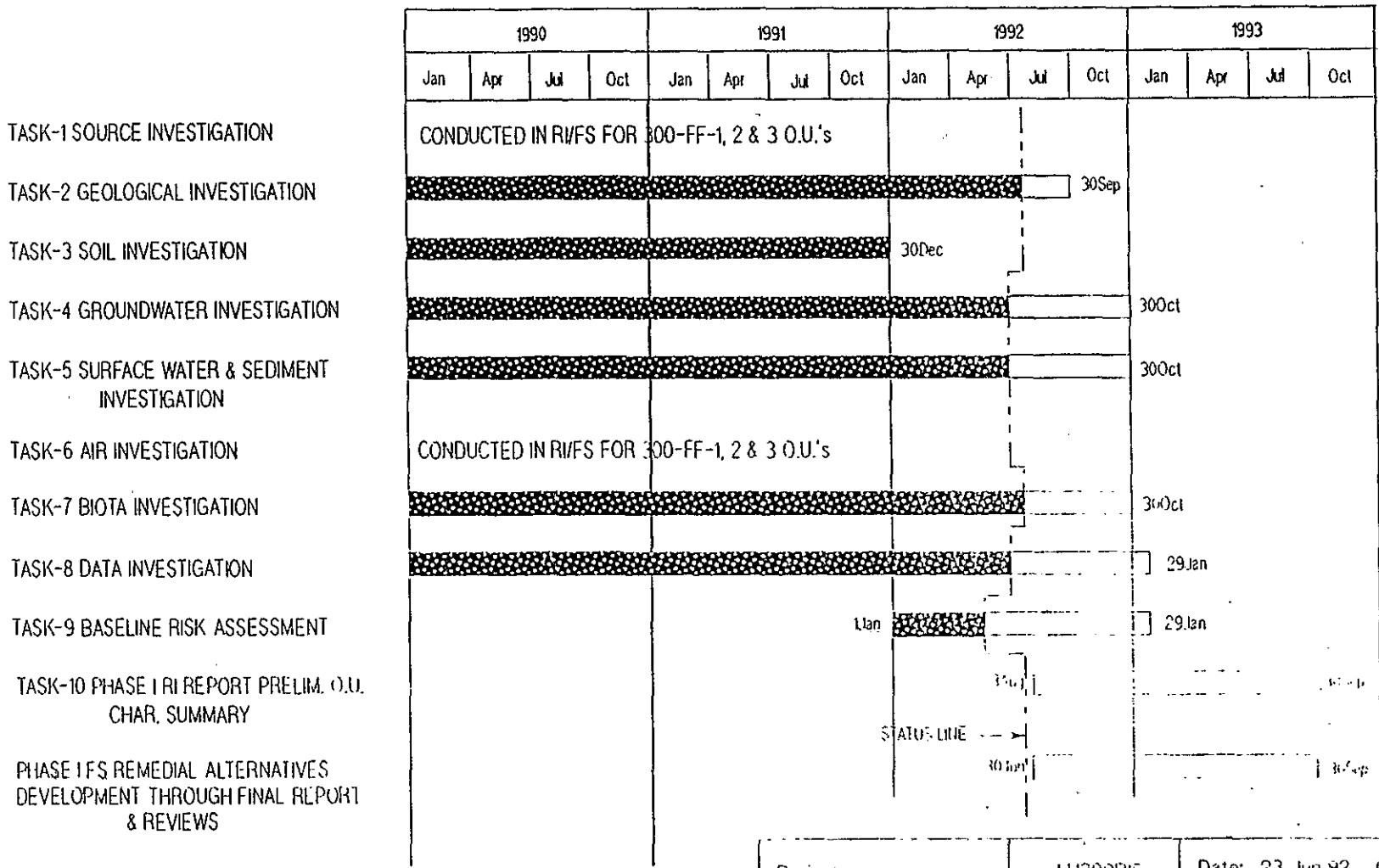
Task 10--Preliminary Site Characterization Summary Report

Task 10a - Draft Report
Task 10b - Final Report

Phase 1 Feasibility Study - Remedial Alternatives Development

Efforts will be initiated as soon as possible to begin this task with available data.

300-FF-5 OPERABLE UNIT
REMEDIAL INVESTIGATION SUMMARY SCHEDULE



Project:	LH300RI5	Date: 23 Jun 92 07:54
300-FF-5 OPERABLE UNIT		
Page: 1 of 1	Drawn by: Steve J. Sakey 6-3092	

Attachment #6

Page 1 of 1

Attachment #7 DRAFT

Change Number	APPROVED DOCUMENT CHANGE CONTROL FORM	Date
300-FF-5-19	Do not use blue ink. Type or print in black.	July 29, 1992

Document Number & Title	Date Document Last Issued
DOE/RL 89-14, "Remedial Investigation/ Feasibility Study Work Plan for the 300-FF-5 Operable Unit, Hanford Site, Richland, Washington	June, 1990

Originator	Phone
B. E. Innis, 300-FF-5 Assistant RI Coordinator	(509) 376-4034

Description of Change

Task 3 pages WP-156 and WP-157 of the 300-FF-5 RI/FS Work Plan discusses performing sediment leaching and adsorption-desorption tests on selected "highly contaminated" samples from the vadose zone (obtained in 300-FF-1 investigation) and the upper unconfined aquifer. This change form will defer these vadose zone and aquifer sample tests until the treatability testing for 300-FF-1 soils is completed, when the need for this testing can be re-evaluated.

Justification and Impact of Change

No "highly contaminated" soil samples from the saturated zone were found in the groundwater monitoring wells for use in the adsorption-desorption testing. A source of groundwater with sufficient contaminants for testing purposes has not been identified in the 300-FF-5 OU. The only 300-FF-1 soil samples that contain contamination above MTCA limits for the contaminants of concern occur within the top 5′ of soil. If the treatability test for the 300-FF-1 is successful, all of these soils will be treated to remove the low concentrations of contaminants present to a proposed depth of 10′-15′ and would not pose a risk of potentially leaching into the ground-water. Sufficient information on these properties exists for modeling purposes to potentially eliminate the need for these tests.

R. G. McLeod

____________________ ____________

DOE Unit Manager Date

D. R. Einan

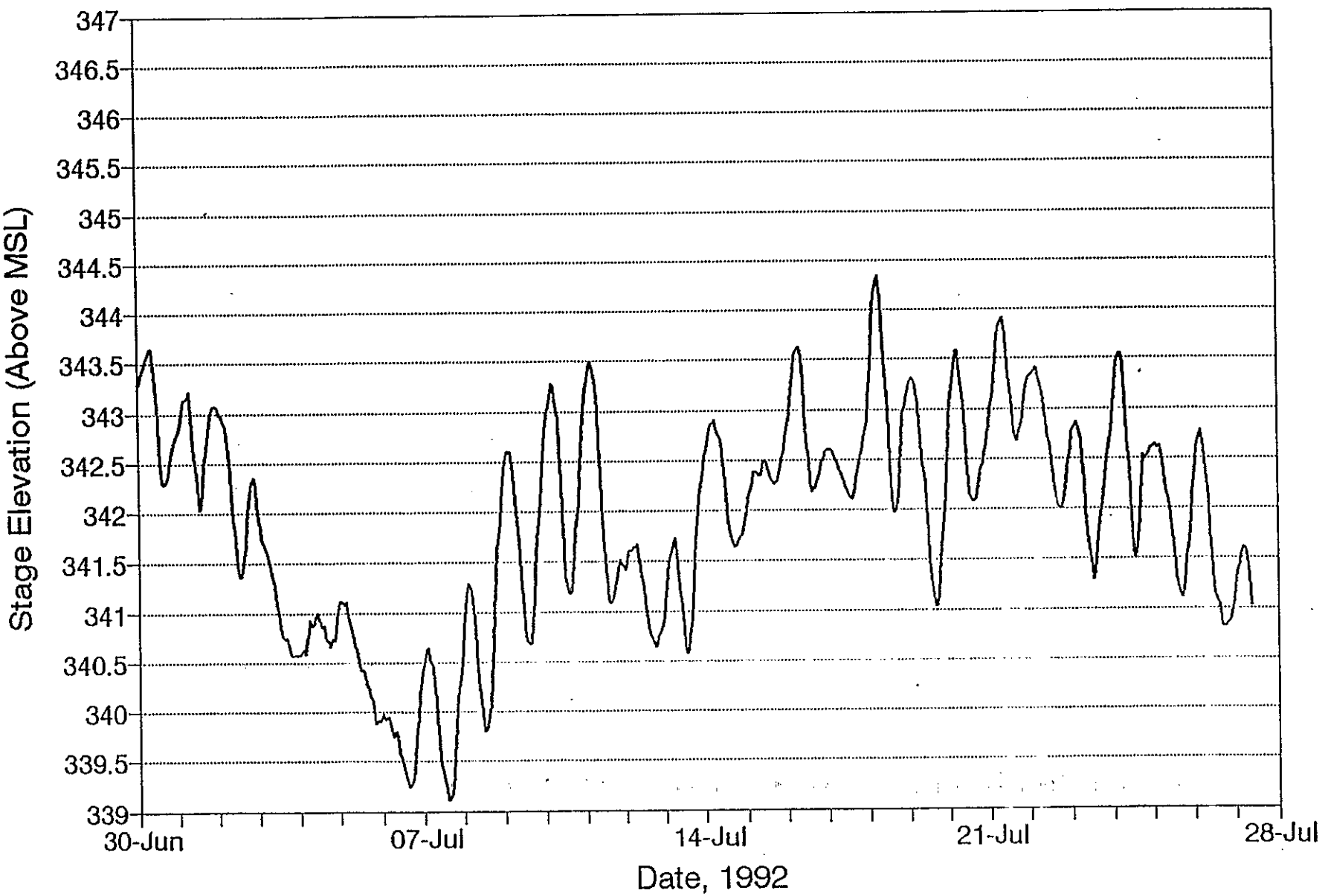
____________________ ____________

Lead Regulatory Unit Manager Date

Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement Section 9.3

River Stage in the 300 Area

SWS - 1



Attachment #8

Attachment #9

PLAN FOR THIRD ROUND GROUNDWATER SAMPLING FOR 300-FF-5

1. 62 wells, in total, (Attachment 1, column 1) will be sampled. Same as first two rounds except that RCRA will sample 20 of these wells and CERCLA will simply utilize the results. This implies that CERCLA will sample only 42 wells. CERCLA sampling will be initiated in mid August. Note that well 399-1-19 will not be sampled due to logistical problems in being able to access the well.

2. Continue use of CLP methods of analysis, except on 20 wells where RCRA sampling will be performed. RCRA analyses are performed to SW-846 methods.

3. Use the same laboratories that were used for the first and second quarters. i.e., use TMA as the main lab and Weston as the split lab. This does not pertain to the RCRA sampling.

4. Perform the analyses required to obtain the contaminants of concern (Table 25 from the work plan) on all 62 wells. Again note that CERCLA sampling will be performed on only 42 of these wells. Those well numbers on Attachment 1 with an asterisk denote the wells to be sampled by CERCLA for the third round. The full list (Table 35) is no longer being performed.

5. Eliminate the following from the contaminants of concern list:
   a) Arochlor 1248 or the Pesticide/PCB class of analytes - For 89 analyses performed since 1985 there has never been a detection in groundwater. This is supported by first round data as well. Even the work plan (WP-122) states that it has never been detected but was retained only because of its low toxicity value.
   b) Fluoride - Of 991 analyses only 390 detections were made with only 1 above DWS. Present concerns from the first round results are being addressed and should be resolved to allow this analyte to be eliminated.
   c) Nitrite - Of 175 analyses it has never been detected.

6. Retain or repeat the following on all 42 wells:
   a) BOD; Coliform; Bicarbonate and carbonate (if possible)
   b) Ammonium - Of 456 analyses it was detected 171 times. A standard does not exist, however values have been approaching a critical toxicity value for aquatic organisms.
   c) Nitrate - repeat using EPA method 353 for reporting of total nitrogen as discussed with K. Pool of OSM.
   d) all rad constituents will be analysed even though indications are that Cobalt and Cesium have never been detected above DWS. No first round data is yet available for corroboration of historical data.

PLAN FOR THIRD ROUND GROUNDWATER SAMPLING FOR 300-FF-5 - continued

7. Continue to collect both filtered and unfiltered samples for metals analysis. Continue to send the filtered sample for metals analysis only as has been done for the past two rounds of sampling.

8. Perform BOD and coliform analysis at HEHF to insure that holding times are met.

9. Insure that wells that were not sampled during the second round (1-7, and 8-1) due to pump problems are repaired and sampled.

10. The analyses required are summarized on the markup of the contaminants of concern list provided as attachment 2.

Column 1 Column 3 Column 4

WELL	300-FF-5 WATER CHEMISTRY WELLS	CERCLA SAMPLE FOR APPENDIX 9 (TABLE 35) LOAD	SAMPLE FOR CONTAMINANTS OF CONCERN (TABLE 25)	RCRA SAMPLED IN 1987	SAMPLED IN 1988	SAMPLED IN 1989	SAMPLED IN 1990	RCRA SAMPLED IN 1991	SITE WIDE
* 399-1-5	X	X		X					
* 399-1-6	X	X			X				X
399-1-7	X		X		X	X		X	
* 399-1-8	X	X			X				X
* 399-1-9	X	X			X				X
399-1-10	X		X		X	X		X	
399-1-11	X		X		X	X			
399-1-12	X		X		X	X		X	
399-1-13	X		X		X	X		X	
399-1-14	X		X		X	X		X	
399-1-15	X		X		X	X		X	X
399-1-16A	X		X	X	X	X		X	
399-1-16B	X		X	X	X	X		X	X
* 399-1-16C	X		X		X	X			
399-1-17A	X		X		X	X		X	X
399-1-17B	X		X		X	X		X	
* 399-1-17C	X		X		X	X			
399-1-18A	X		X		X	X		X	X
* 399-1-18B	X		X		X	X			X
* 399-1-18C	X		X		X	X			X
399-1-19	X		X		X				X
399-2-1	X		X		X	X		X	
* 399-2-2	X		X			X			X
* 399-2-3	X	X							X
* 399-3-2	X	X							X
* 399-3-3	X	X							X
399-3-7	X		X		X	X		X	
399-3-9	X		X			X		X	
399-3-10	X		X		X	X		X	
* 399-3-11	X	X							X
* 399-3-12	X	X							X
399-4-1	X		X		X	X		X	X
399-4-7	X		X		X	X		X	
* 399-4-9	X	X							X
* 399-4-10	X	X							X
399-4-11	X		X		X	X		X	
* 399-4-12	X	X							
* 399-5-1	X	X							X
* 399-6-1	X	X							X
399-8-1	X		X		X	X	X	X	X
* 399-8-2	X		X		X	X			X
* 399-8-3	X		X		X	X			X
* 399-8-4	X	X							X
* 699-S30-E15A	X		X		X				X
* 1A	X	X							
* 1B	X	X							
* 1C	X	X							
* 3A	X	X							
* 4A	X	X							
* 4B	X	X							
* 4C	X	X							
* 5A	X	X							
* 5B	X	X							
* 5C	X	X							
* 6A	X	X							
* 6B	X	X							
* 7A	X	X							
* 7B	X	X							
* 7C	X	X							
* 8A	X	X							
* 1-10B	X	X							
* 1-13B	X	X							
* 1-14B	X	X							

* Note: All RCRA groundwater analyses were conducted by US Testing prior to May, 1990.

Department of Health samples well 17A

Operational monitoring/sampling of well 17A occurs weekly

* = Wells for Third Round CERCLA Sampling

9 2 1 2 3 2 1 3 5 2

Attachment 2
ACH
7/21/92

Table 25. Contaminants of Concern for the 300-FF-5 Operable Unit.

	Gross alpha	Ammonium
	Gross beta	~~Fluoride~~
	pH	Nitrate (as NO_3^-) EPA 353
@ HEHF	Total coliform	~~Nitrite~~
		~~Arochlor 1248~~
ICP	Aluminum	1,2-Dichloroethene
ICP	Antimony	Methylene chloride
ICP	Beryllium	Tetrachloroethene
ICP	Cadmium	Trichloroethene
ICP	Chromium	VOA
ICP	Copper	
ICP	Iron	^{60}Co
ICP	Lead – AA	^{90}Sr
ICP	Manganese	^{137}Cs
ICP	Mercury – AA	^{235}U
ICP	Nickel	^{238}U
ICP	Silver	Gamma Scan
ICP	Zinc	

From Table 35:

Perform BOD analysis at HEHF

Perform Bicarbonate and Carbonate (only if possible)

L.C. HULSTROM
JULY 28, 1992

SUMMARY OF
PLAN FOR TASK 5 SURFACE WATER AND SEDIMENT INVESTIGATION SAMPLING

Based on discussions held on October 17, 1991 and current field conditions:

Task 5b - Riverbank Springs

1. 14 springs have been located and surveyed. Up to 10 of these will be sampled, including 4 major springs. Note that not all of these springs may be flowing at the time of sampling.

2. Communication with the COE and dam operators has been maintained and the weekend of August 22-24 has been targeted. Flows will be held to less than 50,000 cfs and attempts will be made to hold flows as constant as possible. This includes controls at Grand Coulee, Priest Rapids, and McNary dams. This will vary only if power demands require more water flow.

3. Hourly measurements of Temperature, pH, and conductivity will be made at 3 major spring locations and 3 nearby groundwater wells. For a period of at least 12 hours prior to sampling, at a frequency of every 4 hours, field measurements of nitrate, phosphate, and potassium will be performed at the 3 spring and well locations.

4. Sampling will be initiated after it has been verified that the quality of the springs has stabilized, or during the time when the river levels are beginning to rise. Both spring water and sediment will be collected, along with field measurements of temperature, pH, conductivity, phosphate, nitrate, and potassium levels.

5. Analytes of interest will be from the contaminants of concern list (Table 25) with modifications based on the results of groundwater analyses conducted to date and consideration given to other parameters of interest from Table 35. See the attached example for spring water samples.

Task 5c - Nearshore Riverwater and Sediment

1. At each of the 10 spring locations four samples of river water will be collected, based on Figure 5 (SAP/FSP-26). This may be modified in the field dependent on the potential for overlap from neighboring springs.

2. Field and laboratory measurements will basically be the same as that performed for spring samples.

3. At this time no nearshore sediment samples will be taken. From WP-183, "Sediment samples will not be collected during Phase I near-shore sampling activities, pending results of the riverbank spring sediment sample analysis so that constituents of significance can be determined."

300 FF-5 Operable Unit
Spring Sites

St.	Latitude	Longitude	Est. (±) Error (ft)
1	46°23'19"	119°16'12"	85
2	46°23'32"	119°16'17"	87
3	46°23'14"	119°16'20"	89
4	46°23'11"	119°16'20"	90
5	46°22'56"	119°16'21"	137
6	46°22'49"	119°16'21"	72
7	46°22'36"	119°16'18"	176
8	46°22'25"	119°16'14"	73
9	46°22'21"	119°16'14"	78
10	46°22'16"	119°16'13"	81
11	46°22'04"	119°16'06"	78
12	46°21'40"	119°15'59"	100
13	46°21'35"	119°15'58"	104
14	46°21'23"	119°15'54"	109

Note: Circled locations indicate best flowing springs

Proximity of Closest Well Site to Best Flowing Springs

Spring Site	Closest Well	Approx. Distance
6	699-S19-E14	<100 m
7	399-1-10B	40 m
9	399-02-01	90 m
11	399-03-10	50 m

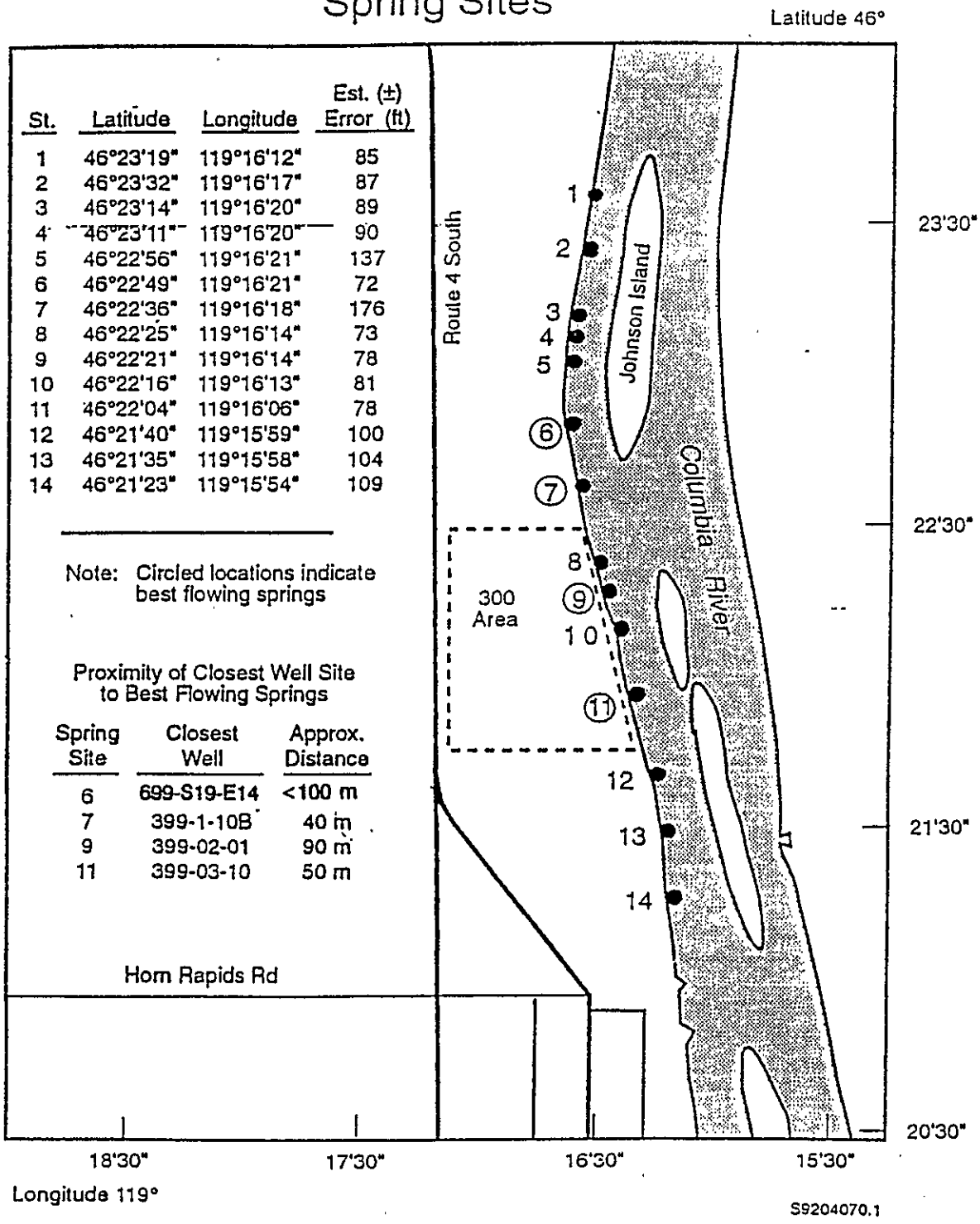


FIGURE 1

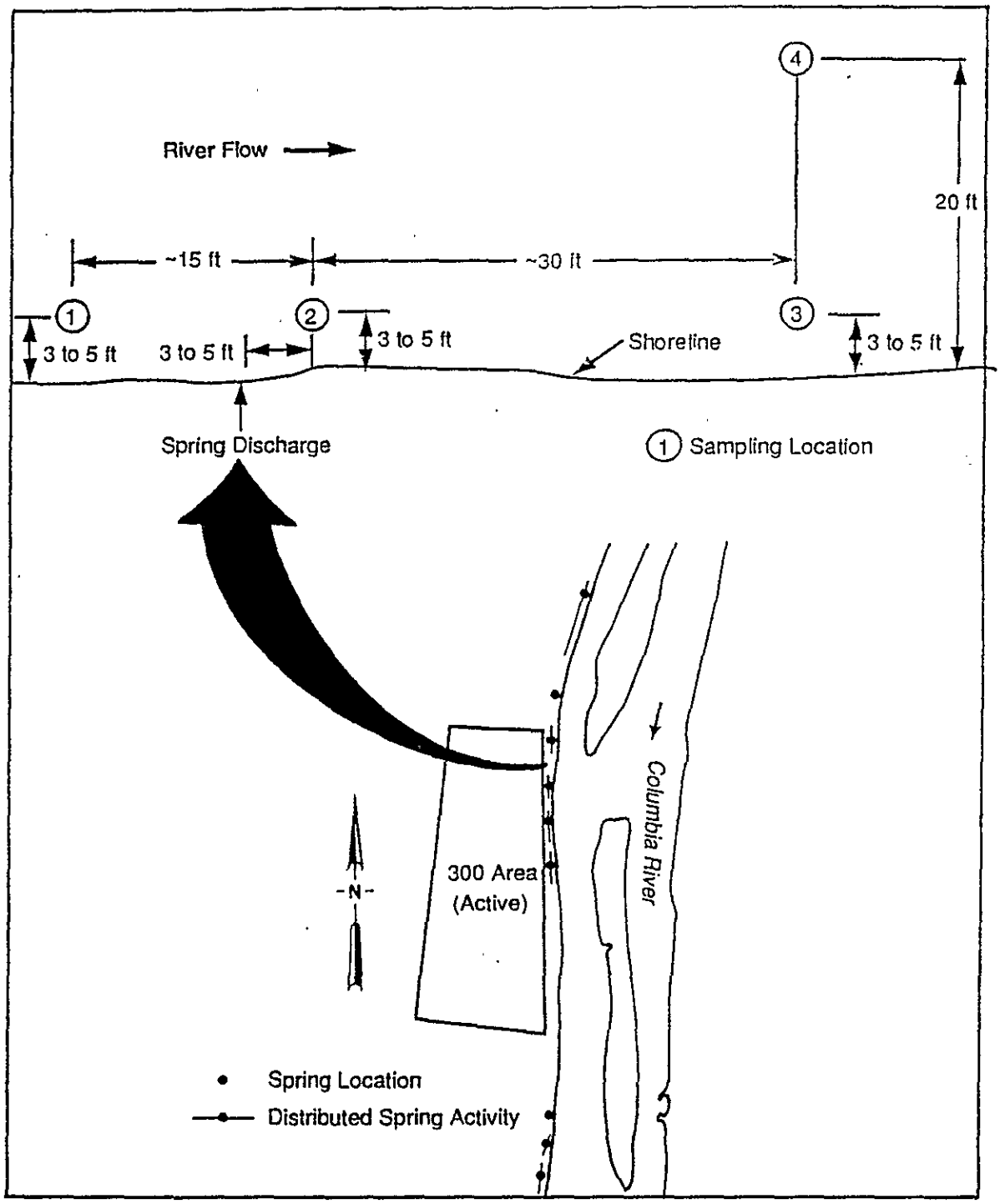


Figure 5. Near-Shore River Water Sampling Locations Relative to Spring Discharge.

Proposed Analyte List for Task 5 - Surface Water and Sediment Investigation
Spring Water Samples

From Table 25. Contaminants of Concern
for the 300-FF-5 Operable Unit. (DOE/RL 89-14)

Gross alpha
Gross beta
pH
@ HEHF Total coliform

ICP:
Aluminum
Antimony
Beryllium
Cadmium
Chromium
Copper
Iron
Lead — AA
Manganese
Mercury - AA
Nickel
Silver
Zinc

Ammonium
~~Fluoride~~
Nitrate (as NO_3^-) EPA 353
~~Nitrite~~

~~Arochlor-1248~~

VOA:
1,2-Dichloroethene
Methylene chloride
Tetrachloroethene
Trichloroethene

Gamma Scan:
^{60}Co
^{90}Sr
^{137}Cs
^{235}U
^{238}U

Add Phosphate to anions list
Add Potassium to metals list
Add Technetium-99 to radiochemical list
Add Tritium to radiochemical list

Perform "Others" from Table 35 as listed below:
- Biological Oxygen Demand at HEHF
- Chemical Oxygen Demand
- Dissolved Oxygen
- Total Organic Carbon
- Total Organic Halogen
- Total Dissolved Solids
- Total Suspended Solids

Attachment #11

DRAFT

Change Number	APPROVED DOCUMENT CHANGE CONTROL FORM	Date
300-FF-5-09	Do not use blue ink. Type or print in black.	10/18/91

Document Number & Title	Date Document Last Issued
DOE/RL 89-14, "Remedial Investigation/ Feasibility Study Work Plan for the 300-FF-5 Operable Unit, Hanford Site, Richland, Washington	June, 1990

Originator	Phone
L. C. Hulstrom, 300-FF-5 RI Coordinator	(509) 376-4034

Description of Change

Task 5 - Surface Water and Sediment Investigation describes the process for obtaining information relevant to spring discharge from the 300 Area into the Columbia River. After review of the procedure prepared by IT that was used for similar work in the 100 Areas the regulators expressed a desire for additional information. Specifically, field measurements of specific parameters such as conductance and pH are to be measured at 2-3 of the major springs for a period of 12 hours prior to initiation of sampling. This will help to qualify the discharge as that being groundwater and not bank storage. In addition the request has been made to measure these same parameters in nearby groundwater wells during this same period. The remainder of the springs (about 10) would be sampled as originally planned but would include measurement of parameters of interest for one hour before the sampling event.

Note: Include affected page number Section 5.3.5 (WP-178) and Section 2.0 (SAP/FSP-22)

Justification and Impact of Change

The additional work scope described above has been requested by the regulators as a means of further insuring that the water that is sampled is groundwater and not bank storage. Impacts of the change are present both in an increase in the time required for performing the survey and the costs associated with the schedule and the additional sampling that is required.

_____ _____

DOE Unit Manager Date

D. R. Einan

_____ _____

Lead Regulatory Unit Manager Date

Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement Section 9.3

Attachment #12

DRAFT

Change Number	APPROVED DOCUMENT CHANGE CONTROL FORM	Date
300-FF-5-20	Do not use blue ink. Type or print in black.	07/28/92

Document Number & Title	Date Document Last Issued
DOE/RL 89-14, "Remedial Investigation/ Feasibility Study Work Plan for the 300-FF-5 Operable Unit, Hanford Site, Richland, Washington	June, 1990

Originator	Phone
L. C. Hulstrom, 300-FF-5 RI Coordinator	(509) 376-4034

Description of Change

The description for Task 5 - Surface Water and Sediment Investigation subdivides data collection into 3 phases. This change form proposes to defer phase 2 and 3 activities until the Phase 2 RI at which time evaluation of data collected during the Phase I RI will have been completed. This presumes that collection of samples in 1992 is possible. Only collection of spring water, groundwater from wells adjacent to several springs, spring sediment, and nearshore river water samples will be collected during the Phase I RI. All other activities described as phase 2 and 3 will be deferred to the Phase II RI. This includes survey and sampling of springs on the east side of the river (Section 5.3.5.2), near shore sediment sampling (WP-183), determination of background near shore river concentrations (WP-183), bathymetric surveys and velocity measurements (WP-184), and Task 5d Transect River Water (Section 5.3.5.4).

Note: Include affected page number Task 5, Section 5.3.5, WP-178 - WP-187, and Task 5, Section 2.0, SAP/FSP-22 - 27

Justification and Impact of Change

Due to high water conditions encountered during 1991 which prevented sampling it is necessary to postpone several activities to the Phase 2 RI. Pending successful collection of samples in 1992 it will be possible to better define future needs for the Phase 2 RI.

R. G. McLeod

DOE Unit Manager _____ Date _____

D. R. Einan

Lead Regulatory Unit Manager _____ Date _____

Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement Section 9.3

9212130

Distribution

Unit Manager's Meeting: 300-FF-5 Operable Unit
July 30, 1992

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ADMINISTRATIVE RECORD: 300-FF-5; Care of EDMC, WHC (H4-22)

This list has been updated. Please inform Suzanne E. Clarke (SWEC) of deletions or additions to the distribution list (A4-35).